

Accepted Manuscript

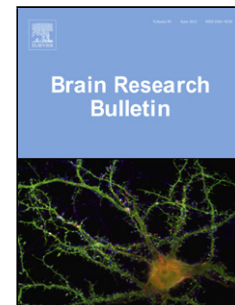
Title: Visual mismatch response and fMRI signal adaptation correlate in the occipital-temporal cortex

Authors: Catarina Amado, Polina Stoyanova, Gyula Kovács

PII: S0166-4328(17)31097-5
DOI: <https://doi.org/10.1016/j.bbr.2018.03.001>
Reference: BBR 11323

To appear in: *Behavioural Brain Research*

Received date: 3-7-2017
Revised date: 1-3-2018
Accepted date: 2-3-2018



Please cite this article as: Amado C, Stoyanova P, Kovács G, Visual mismatch response and fMRI signal adaptation correlate in the occipital-temporal cortex, *Behavioural Brain Research* (2010), <https://doi.org/10.1016/j.bbr.2018.03.001>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Visual mismatch response and fMRI signal adaptation correlate in the occipital-temporal cortex

Catarina Amado ^a, Polina Stoyanova ^a, Gyula Kovács ^{a,b,c}

^a Institute of Psychology, Friedrich Schiller University Jena, 07743 Jena, Germany

^b Person Perception Research Unit, Friedrich Schiller University Jena, 07743 Jena, Germany

^c Brain Imaging Centre, Research Centre for Natural Sciences, Hungarian Academy of Sciences, Budapest, Hungary

Correspondence to: Gyula Kovács; Institute of Psychology, Friedrich Schiller University Jena, 07743 Jena, Germany; gyula.kovacs@uni-jena.de; +49 3641 9 45936

Abstract

Several electrophysiological studies found response differences to a given stimulus when it is repeated frequently as compared to when it occurs rarely in oddball sequences. Initially defined in acoustic perception, such difference also exists in the visual modality and is referred to as visual mismatch negativity (vMMN). However, the repetition of a stimulus also leads to the reduction of the blood oxygen-level dependent (BOLD) signal (fMRI adaptation, fMRIa) when compared to alternating stimuli in fMRI experiments. So far no study compared the vMMN to fMRIa within the same paradigm and participants. Here we tested the possible connection between fMRIa and vMMN in a visual oddball paradigm in two separate sessions, acquiring electrophysiological and neuroimaging data for real and false characters from the same participants. We found significant visual mismatch response (vMM) as well as fMRIa for both character types. Importantly, the magnitude of the vMM over the CP1 electrode cluster showed a significant correlation with the

Download English Version:

<https://daneshyari.com/en/article/8837772>

Download Persian Version:

<https://daneshyari.com/article/8837772>

[Daneshyari.com](https://daneshyari.com)